

2010-05-21 Friday Morning Notes

Friday, May 21, 2010
7:11 AM

Stacking

Transfers

- Unstacked 586mA in 74 transfers over 25 sets with an average efficiency of 96.1%

Studies

- Stacktail Phasing with 30e10 - looking for opportunistic non-stacking time
- Stacktail tank moving - parasitic
- Jim Morgan would like to change beamline C204 limits based on calculations using the model. We will be doing one plane of one beamline at a time.

Access & Maintenance

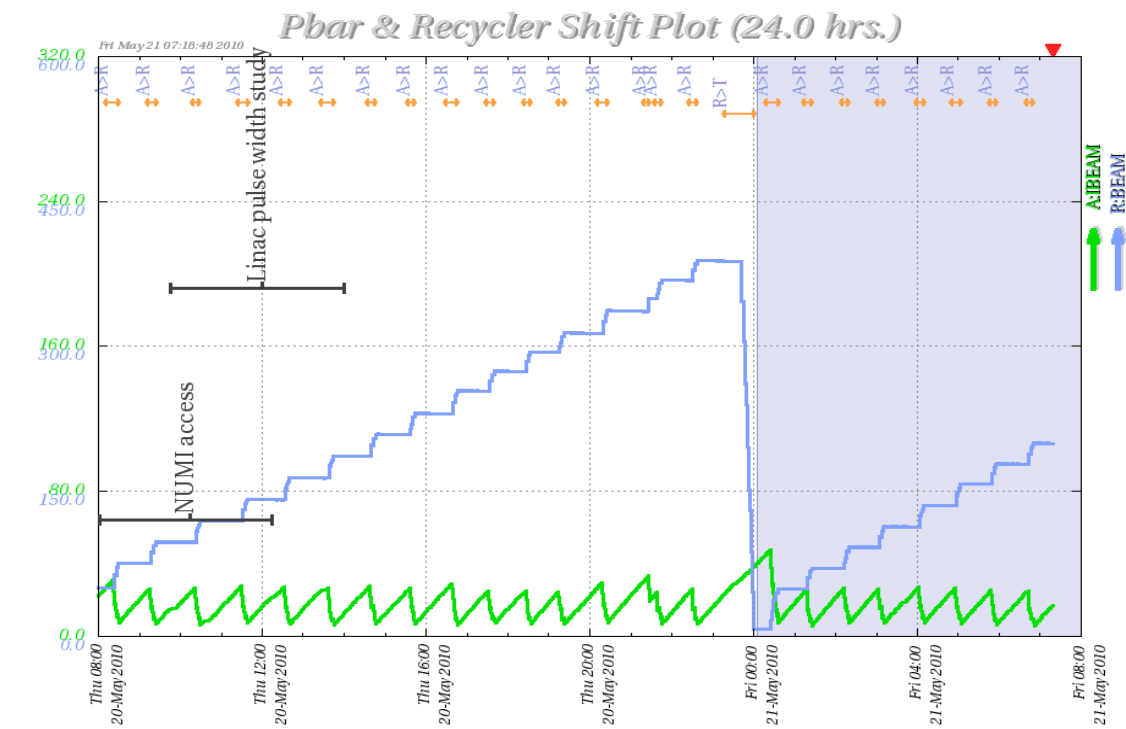
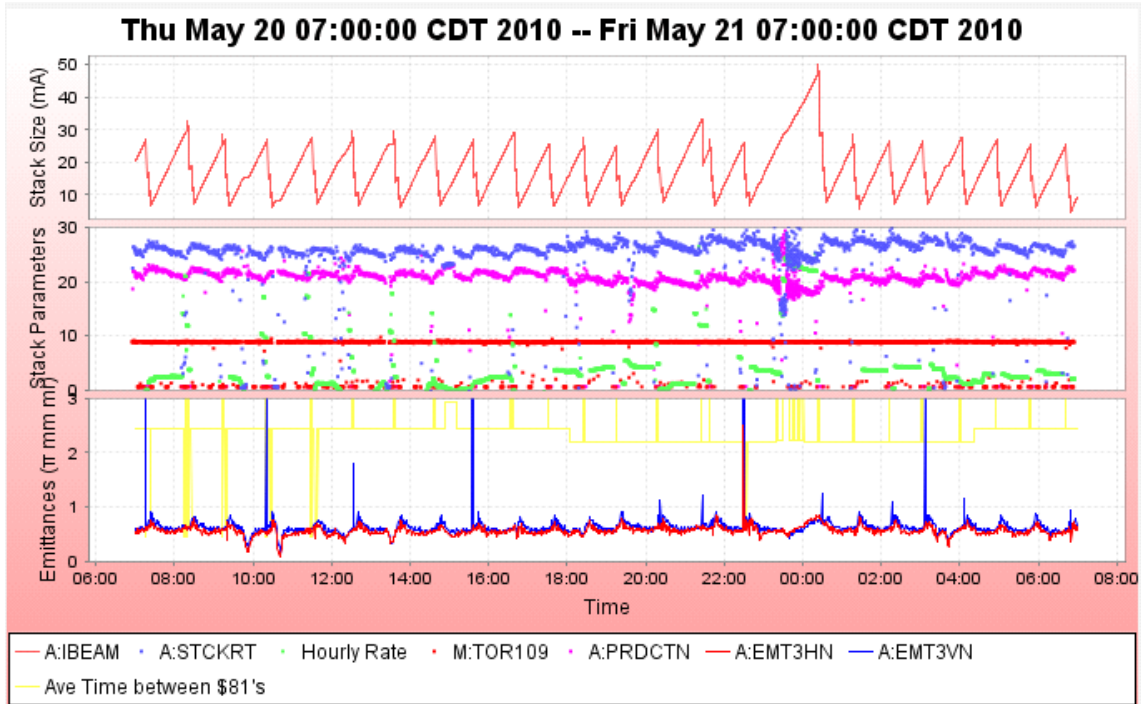
- Pbar Dry Engine maintenance - Cryo needs to change the flywheel, which is a two hour job. We will try to complete this job today.
- Increase power in 4-8 GHz TWTs by 10 W each. Requires tunnel measurements.
- Repair D:POTMF
- D:H1AL1 regulator replacement (http://www-bd.fnal.gov/cgi-worklist/worklist_form.pl?id=11905)
- Ralph, Wes and Pete not available until after Thursday.

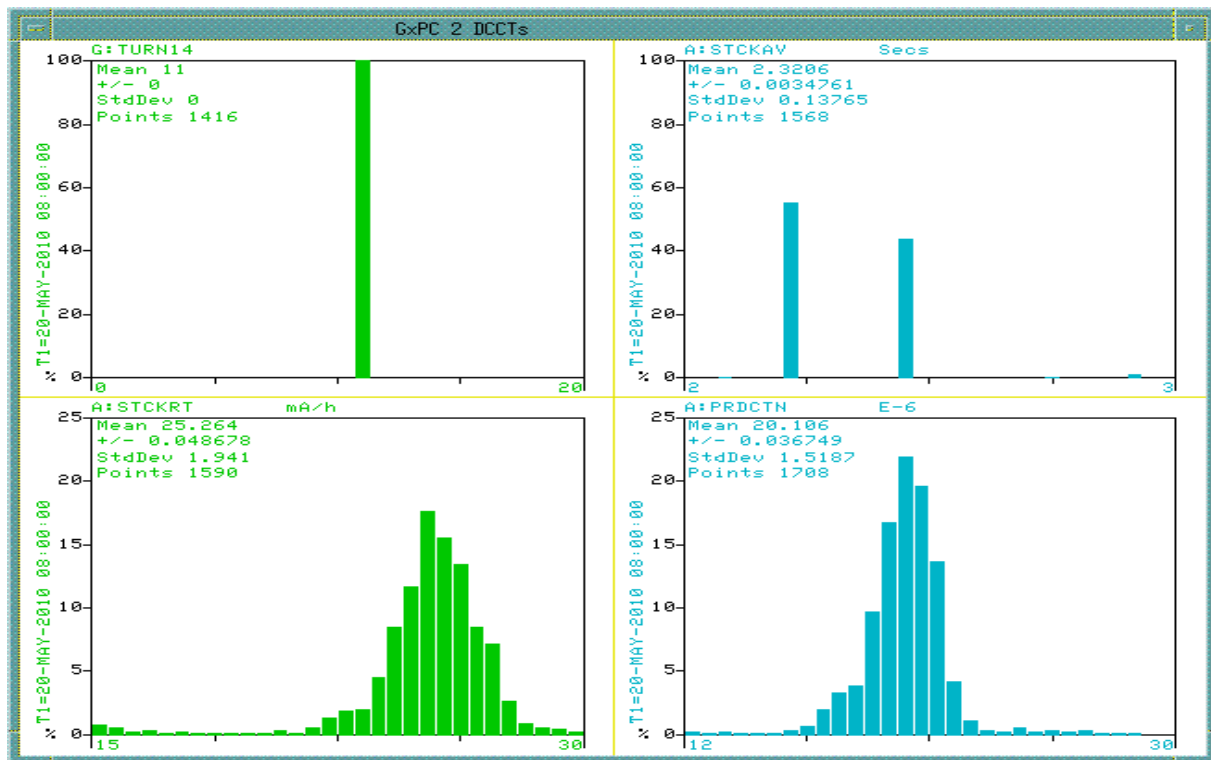
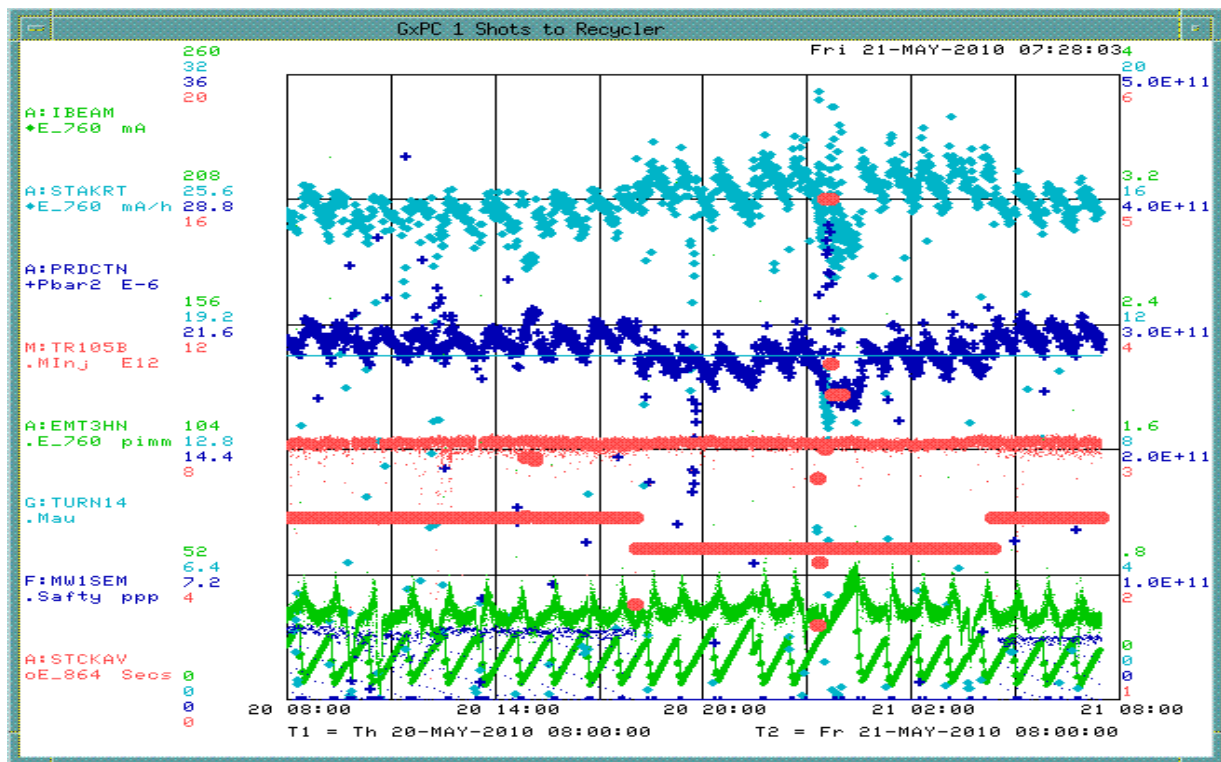
The Numbers

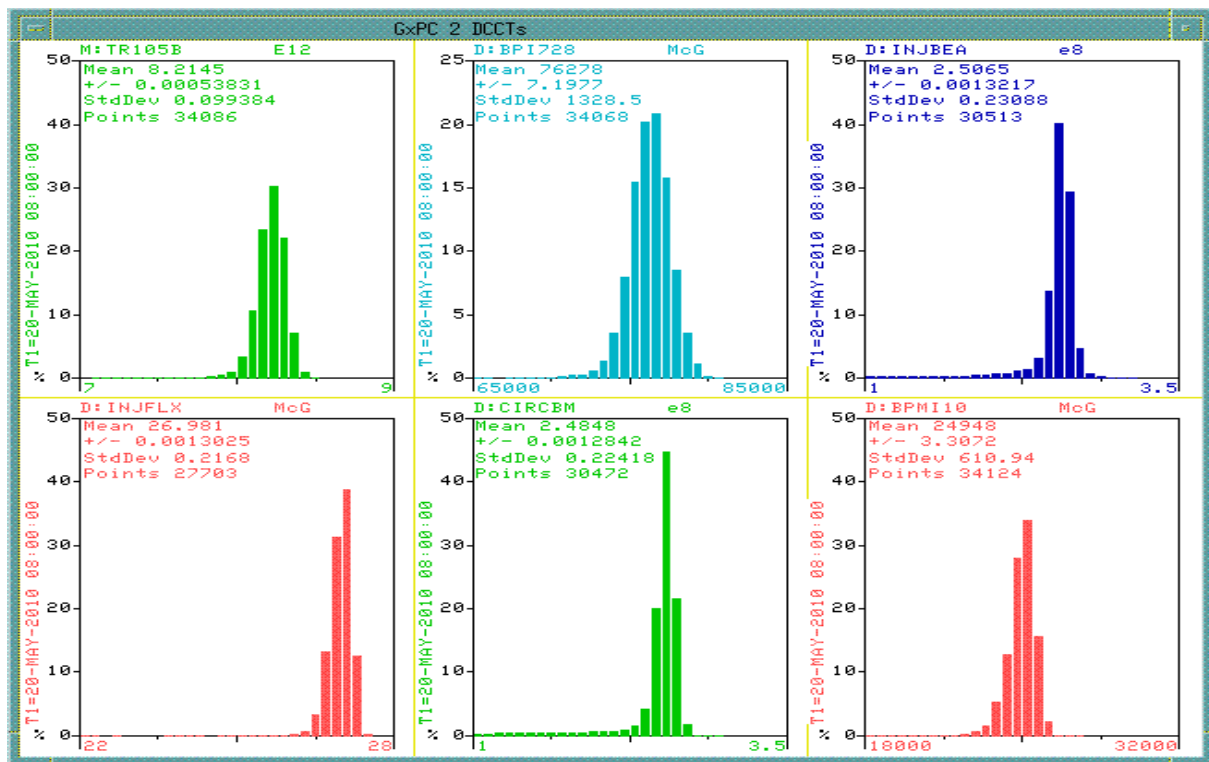
- Stacking
 - Pbars stacked: 578.27 E10
 - Time stacking: 23.75 Hr
 - Average stacking rate: 24.35 E10/Hr
- Uptime
 - Number of pulses while in stacking mode: 36009
 - Number of pulses with beam: 34713
 - Fraction of up pulses was: 96.40%
- The uptime's effect on the stacking numbers
 - Corrected time stacking: 22.89 Hr
 - Possible average stacking rate: 25.26 E10/Hr
 - Could have stacked: 599.86 E10/Hr
- Recycler Transfers
 - Pbars sent to the Recycler: 574.44 E10
 - Number of transfers : 72
 - Number of transfer sets: 25
 - Average Number of transfer per set: 2.88
 - Time taken to shoot including reverse proton tuneup: 00.25 Hr
 - Transfer efficiency: 96.07%
- Other Info
 - Average POT : 8.21 E12
 - Average production: 20.29 pbars/E6 protons

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The Plots







Column 1 Number _0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time	Column 21 Number _20_A-I BEAMB sampled on \$91 (A-BEA M7), E10	Column 22 Number _21_A-I BEAMB sampled on \$94 (A-BEA M9), E10	Unstacked (mA)	Column 23 Number _22_R: BEAMS (R-BEA ME0[0]) pre xfer E10	Column 24 Number _23_R: BEAM (R-BEA ME0[1]) post xfer, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to M12 Eff	Transfers	Sets	Column 5 Number _4_Acc Horizontal Emittance	Column 6 Number _5_Acc Vertical Emittance	Column 8 Number _7_Acc Longitudinal Emittance	
	Totals =>			586.77			564.12	96.14%	97.22%	97.37%	74	25	5.4792	5.8853	1.9282	
19166	Friday, May 21, 2010	6:42	25.24	4.71	22.39	178.28	199.84	21.66	96.74%	97.18%	97.38%	3	1	4.551	5.08	1.914
19165	Friday, May 21, 2010	5:48	25.32	5.90	21.97	157.38	178.52	21.18	96.40%	97.31%	97.67%	3	1	5.345	5.793	1.916
19164	Friday, May 21, 2010	4:56	26.87	6.51	22.92	135.45	157.55	22.20	96.85%	97.77%	98.79%	3	1	5.48	5.714	1.949
19163	Friday, May 21, 2010	4:02	27.47	6.91	23.18	113.29	135.64	22.46	96.89%	96.07%	95.34%	3	1	5.391	5.81	1.922
19162	Friday, May 21, 2010	3:04	26.34	6.84	22.12	92.06	113.41	21.45	96.97%	96.92%	96.30%	3	1	5.841	6.187	1.956
19161	Friday, May 21, 2010	2:13	26.72	6.93	22.44	70.58	92.21	21.61	96.28%	96.83%	98.97%	3	1	5.511	6.054	1.938
19160	Friday, May 21, 2010	1:18	25.62	5.64	22.44	49.04	70.68	21.72	96.79%	97.36%	96.49%	3	1	5.051	5.732	1.898
19159	Friday, May 21, 2010	0:25	48.04	7.28	44.38	7.21	49.10	41.96	94.55%	96.69%	96.83%	4	1	6.699	6.587	1.897
19158	Thursday, May 20, 2010	22:30	26.19	6.34	22.45	368.08	389.46	21.58	96.12%	97.02%	98.90%	3	1	5.711	6.054	1.927
19157	Thursday, May 20, 2010	21:39	24.42	6.48	20.61	349.59	369.20	19.80	96.08%	96.66%	97.08%	3	1	5.831	6.152	1.946
19156	Thursday, May 20, 2010	21:26	33.20	19.01	14.20	336.27	349.87	13.60	95.79%	97.86%	98.03%	1	1	5.992	6.002	1.92
19155	Thursday, May 20, 2010	20:19	29.86	7.23	25.18	313.33	337.29	24.12	95.79%	97.04%	98.17%	3	1	5.692	6.148	1.933
19154	Thursday, May 20, 2010	19:15	24.99	6.33	21.27	293.89	314.19	20.41	95.92%	96.60%	95.84%	3	1	5.324	5.976	1.93
19153	Thursday, May 20, 2010	18:26	25.19	6.35	21.41	274.03	294.48	20.64	96.38%	97.03%	96.86%	3	1	5.324	5.728	1.945
19152	Thursday, May 20, 2010	17:32	25.64	6.39	21.83	253.90	274.55	20.72	94.93%	97.06%	96.37%	3	1	5.459	5.853	1.951
19151	Thursday, May 20, 2010	16:38	29.09	5.94	25.01	230.30	254.32	24.10	96.34%	97.76%	96.70%	3	1	5.11	5.598	1.874
19150	Thursday, May 20, 2010	15:37	26.78	6.59	22.76	208.99	230.79	21.90	96.21%	98.05%	97.90%	3	1	5.469	5.828	1.934
19149	Thursday, May 20, 2010	14:38	27.86	6.39	23.98	186.30	209.32	23.07	96.19%	96.78%	96.38%	3	1	5.186	5.662	1.898
19148	Thursday, May 20, 2010	13:37	27.00	5.78	23.73	163.66	186.56	22.89	96.49%	97.69%	99.12%	3	1	5.211	5.511	1.91
19147	Thursday, May 20, 2010	12:33	27.34	6.33	23.57	141.27	164.01	22.85	96.94%	98.07%	98.17%	3	1	5.276	5.684	1.95
19146	Thursday, May 20, 2010	11:30	27.72	7.09	23.19	119.42	141.52	22.22	95.82%	97.96%	97.54%	3	1	5.225	6.07	1.97
19145	Thursday, May 20, 2010	10:22	26.78	6.15	23.19	97.47	119.67	22.27	96.03%	97.98%	98.29%	3	1	5.52	5.873	1.927
19144	Thursday, May 20, 2010	9:16	26.81	6.39	22.98	75.64	97.66	22.15	96.41%	97.28%	97.74%	3	1	5.409	6.011	1.947
19143	Thursday, May 20, 2010	8:22	31.04	7.10	26.52	50.40	75.73	25.47	96.03%	96.60%	95.55%	3	1	5.771	6.061	1.927
19142	Thursday, May 20, 2010	7:16	26.99	6.53	23.05	28.51	50.53	22.10	95.88%	97.53%	98.73%	3	1	5.6	5.965	1.926